

AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the application:

Claim 1 (Currently Amended) A self-booting software defined radio (SDR) module that interfaces with a host system, said module comprising:

 a modulation/demodulation section with a stored run-time kernel, wherein a processing unit of said modulation/demodulation section executes said run time kernel;

 an interface mechanism coupling said host system to said module, wherein said host system provides a plug-and-play capability and a set of reconfiguration information, and wherein said interface mechanism is a plug-and-play interface mechanism; and

 a front end unit receiving communications signals and processing said communications signals using said reconfiguration information.

Claim 2 (Currently Amended) The self-booting software defined radio (SDR) module according to claim 1, wherein said modem/demodulation modulation/demodulation section comprises a memory unit.

Claim 3 (Currently Amended) The self-booting software defined radio (SDR) module according to claim 2, wherein said memory unit is selected from the group consisting of at least one of comprising: FLASH memory and RAM.

Claim 4 (Original) The self-booting software defined radio (SDR) module according to claim 1, further comprising a multi-port crossbar coupled to said front end unit.

Claim 5 (Original) The self-booting software defined radio (SDR) module according to claim 1, modulation/demodulation section further comprises a high speed fabric.

Claim 6 (Currently Amended) The self-booting software defined radio (SDR) module according to claim 1, wherein said communications signals are selected from a plurality of formats selected from the group consisting of ~~comprising~~: Code Division Multiple Access (CDMA), Time Division Multiple Access (TDMA), Global System for Mobilization (GSM), Cellular Digital Packet Data (CDPD), DataTac, Mobitex, General Packet Radios Service (GPRS), and Personal Communication Service (PCS).

Claim 7 (Currently Amended) The self-booting software defined radio (SDR) module according to claim 1, wherein said ~~interface mechanism is a~~ plug-and-play is selected from the group ~~comprising~~ consisting of: Peripheral Component Interconnect (PCI), Universal Serial Bus (USB), and IEEE 1394 Firewire, TCP/IP.

Claim 8 (Original) The self-booting software defined radio (SDR) module according to claim 1, wherein said interface mechanism is embedded in said module and communicates with said host on a bus.

Claim 9 (Original) The self-booting software defined radio (SDR) module according to claim 1, wherein said front end comprises at least one radio frequency port, at least one transceiver coupled to said radio frequency port.

Claim 10 (Currently Amended) The self-booting software defined radio (SDR) module according to claim 1, wherein said host system is selected from at least one of a cellular device, a laptop computer, a personal digital assistant (PDA), and a mobile transportation processor.

Claim 11 (Original) The self-booting software defined radio (SDR) module according to claim 1, further comprising at least one antenna switchably coupled to said front end unit.

Claim 12 (Currently Amended) The self-booting software defined radio (SDR) module according to claim 1, wherein said module comprises at least partially reconfigurable logic devices selected from the group consisting of comprising: field programmable gate array (FPGA), and programmable logic device (PLD).

Claim 13 (Currently Amended) A software reconfigurable radio/wireless module employing an SCA architecture a software communications architecture (SCA), comprising:

at least one processor unit;
at least one memory unit coupled to said processor unit by a control bus;
a plurality of reconfigurable elements;
an interface mechanism for transferring reconfiguration information from a host device to said reconfigurable elements, wherein said interface mechanism is a plug-and-play interface mechanism;
at least one radio frequency interface block; and
at least one multi-port reconfigurable crossbar switch with bi-directional ports coupling to said radio frequency interface block and to said processor unit.

Claim 14 (Currently Amended) The software reconfigurable radio/wireless module according to claim, [[12]] 13 wherein said radio frequency interface comprises at least one switchably coupled antenna.

Claim 15 (Currently Amended) The software reconfigurable radio/wireless module according to claim, [[12]] 13 wherein said multi-port crossbar switch uses a serial digital interface.

Claim 16 (Currently Amended) The software reconfigurable radio/wireless module according to claim, [[12]] 13 wherein said reconfigurable elements comprise reconfigurable ~~transeeivers~~, transceivers.

Claim 17 (Currently Amended) The software reconfigurable radio/wireless module according to claim, [[12]] 13 wherein said multi-port crossbar switch uses a serial digital interface.

Claim 18 (Currently Amended) A switched fabric software defined radio module, comprising:

at least two reconfigurable logic ~~device~~ devices on said module, wherein said reconfigurable logic devices are each comprising:

a front end unit for transmission and reception of information signals;
a processing unit;
a memory section;
a crossbar switch; and

[[a]] an internal fabric interface, wherein said processing unit, said memory section, and said crossbar switch are coupled to said internal fabric interface.

Claim 19 (Original) The switched fabric software defined radio module according to claim 18, wherein said crossbar switch is configured as a ring.

Claim 20 (Currently Amended) The switched fabric software defined radio module according to claim 18, wherein said devices further comprises an SCA a software communications architecture (SCA) run time kernel.